

F. BARR.
ELECTRIC SWITCH SOCKET.
APPLICATION FILED FEB. 19, 1913.

1,064,426.

Patented June 10, 1913.

Fig. 1.

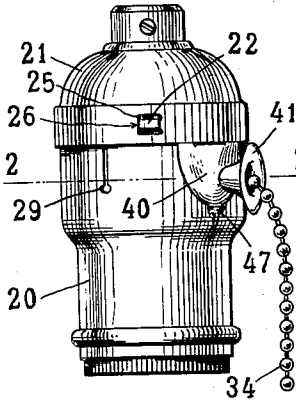


Fig. 2.

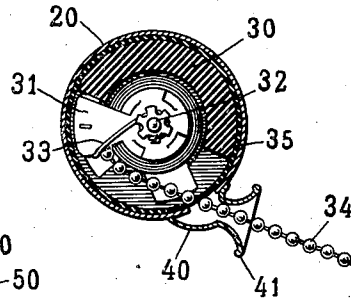


Fig. 3.

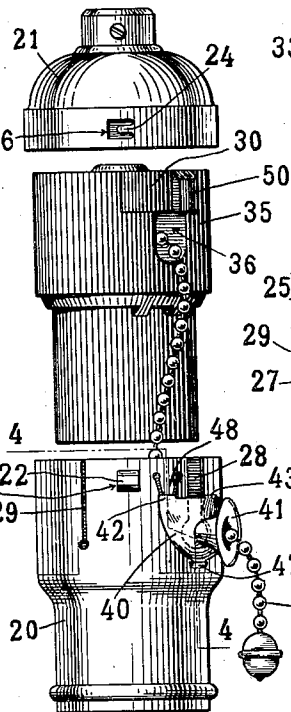


Fig. 5.

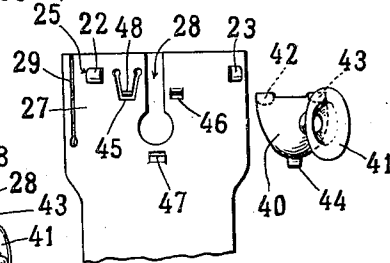


Fig. 4.

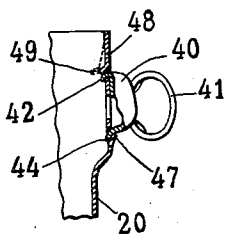


Fig. 6.

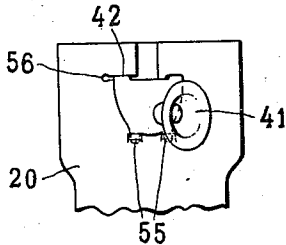


Fig. 9.

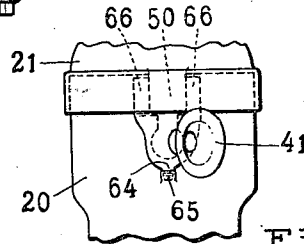


Fig. 10.

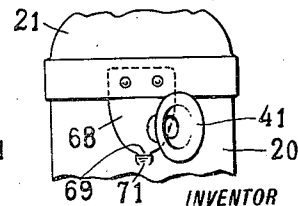


Fig. 7.

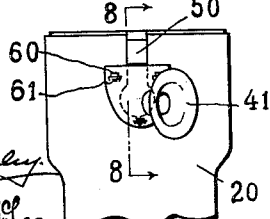
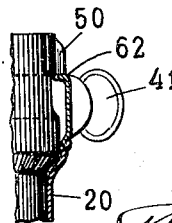


Fig. 8.



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ELECTRIC-SWITCH SOCKET.

1,064,426.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FREDERIC BARR, a citizen of the United States of America, and residing at New York, in the county of Kings and State of New York, have invented new and useful Improvements in Electric-Switch Sockets, of which the following is a specification.

My invention relates particularly to what are commonly termed pull sockets and especially to the shell and chain guide construction.

The main object is to provide a simple and inexpensive form of construction in which the chain guide is detachably secured to the shell itself so that when the parts of the shell are separated the chain guide will remain attached but may be readily detached if desired.

The invention in its preferred form contemplates providing the shell body and the chain guide with interlocking means and a spring catch which can be readily operated to release the chain guide when it is desired to separate it from the shell.

Certain details of construction may be found useful in other cases and it should be therefore understood that they are covered by the claims, the terms of which should be considered as terms of description rather than limitation except so far as required by the prior art.

Figure 1, is a side view of a construction embodying the preferred form of my invention. Fig. 2, is a horizontal section and plan of the same on the plane of the line 2—2 of Fig. 1. Fig. 3, is a drop view showing the parts of the shell separated and the socket withdrawn. Fig. 4, is a fragmentary vertical sectional view of the shell and chain guide on the plane of the line 4—4 of Fig. 3. Fig. 5, is a side view of the shell body and chain guide separated. Fig. 6, is a side view showing a modified form of chain guide and method of securing it to the shell. Fig. 7, is a similar view of another modification. Fig. 8, is a vertical section on the plane of the line 8—8 of Fig. 7. Figs. 9 and 10 are side views of other modifications.

The shell in the customary manner is formed of the body 20 and the cap 21 adapted to be telescopically connected and interlocked by suitable means to prevent accidental disconnection. The interlock shown consists of two or more loops such as 22 and 23 carried by the shell body and correspond-

ing tongues such as 24 carried by the cap. One of the loops is provided with an abrupt shoulder 25 to cooperate with a shoulder 26 adjacent one of the tongues in the cap to prevent backward rotation and accidental disengagement. This loop 22 is carried by a resilient portion 27 of the shell body. This portion may be made particularly resilient for instance, by being disconnected laterally from the rest of the body by the narrow chain slot 28 and the cut or slit 29.

The switch mechanism proper may be of any suitable construction carried by an insulating block 30. In the particular form shown the operating lever 31 is pivoted on the spindle or post 32 and held yieldingly in its normal position of rest by a spring 33. The chain 34 is adapted to oscillate the lever 31 in one direction against the tension of the spring 33. Suitable insulating fiber such as 35 may be employed to surround the switch block and mechanism as is customary and this fiber may be slotted at 36 to provide suitable clearance for the operating chain.

The chain guide proper consists of a base member or plate 40 and a projecting portion or bell 41. The base in the form shown in Figs. 1 to 5 has a plurality of hook-like lugs such as 42, 43 and 44. The shell is provided with a series of seats such as 45, 46 and 47 formed adjacent openings in the shell body and arranged to correspond with the lugs on the chain guide base so that the lugs may be hooked into the openings and engage the seats. The arrangement of the lugs is such that the chain guide is prevented from tilting sidewise or laterally. The 3-point support insures a uniform bearing even if the base or shell or lugs should become somewhat distorted and affords sufficient strength to withstand all ordinary strains which may be brought to bear upon the chain guide by the operation of the chain. To hold the chain guide to the shell body I provide a catch in the form of a spring tongue 48 above the edge of the base and preferably adjacent one of the lugs such as 42 and its seat 45. This tongue is also preferably provided with an inwardly projecting shoulder 49 which affords a broader bearing for the lug 42 as shown in Fig. 4. It will be seen that the chain guide may be readily detached by simply pressing the tongue 48 inward into the position shown dotted in Fig. 4 and then moving the chain

guide toward the edge of the shell body so as to disengage the lugs 42, 43 and 44 from the seats 45, 46 and 47. To assemble the parts it is simply necessary to insert the
 5 lug 44 in the opening adjacent the seat 47 and bring the two upper lugs 42 and 43 into position adjacent their seats and then press the chain guide against the shell body so as to snap the lug 42 beneath the spring
 10 tongue 48. In the form shown the insulating block 30 is provided with a lug 50 which projects into the upper end of the chain slot 28 to prevent relative rotation of the switch block in the shell.

15 In the form of construction shown in Fig. 6 there are two lugs 55 at the bottom and the catch for detachably holding the chain guide shell body is formed by cutting the shell at 56 so as to provide a yielding tongue
 20 immediately above the lug 42.

In the form shown in Figs. 7 and 8 the chain guide is secured to the base by means of a series of lugs 60 which project from the shell body through openings 61 in the chain
 25 guide base, and the base is provided with a lug 62 which projects beneath the lug 50 on the switch block and holds the chain guide in place.

In Fig. 9, the chain guide base has a lug
 30 64 engaging in the seat 65 in the shell below the chain slot and upwardly projecting fingers 66 which are prevented from lateral displacement by engagement with the lug 50 beneath the flange of the cap.

35 In Fig. 10, the chain guide base 68 is shown as riveted to the cap and provided with a lug 69 engaging the seat 71 in the body of the shell.

In all the forms of construction shown
 40 and described it will be noted that the chain guide is located entirely on the outside of the body of the shell and is detachably secured in place entirely independent of the chain slot.

45 It will be noted that the forms of Figs. 1 to 6 have all the advantages of a chain guide attached to the shell and the advantages of a detachable chain guide as well.

What I claim is:—

50 1. In a pull socket switch, the combination of a shell body provided with a chain slot, a chain guide having a base fitting the outside of the shell body and disposed over the chain slot to cover the lower end of the
 55 said slot, interlocking means on the chain guide base and shell body disposed below the end of the chain slot to secure the lower end of the chain guide base in close engagement with the shell body, and means se-
 60 curing the upper portion of the chain guide base in close engagement with the shell body.

2. In a pull socket switch, the combina-
 65 tion of a shell body provided with a chain slot and with a seat below the end of the

chain slot, a chain guide having a base lying on the outside of the shell body, fitting the shell body and covering the lower portion of the chain slot therein, a lug on the lower end of the chain guide base, engaging
 70 the seat below the chain slot to secure the lower end of the chain guide base against the outside of the shell body and prevent lateral displacement of the chain guide and means securing the upper end of the chain
 75 guide base against the shell body.

3. In a pull socket switch, the combination of a shell body provided with a chain slot, a seat below the chain slot and a seat
 80 disposed in a plane above that of the first seat, a chain guide, lugs substantially at the upper and lower ends of said chain guide adapted to engage in the seats in the shell body, and a spring tongue on the shell body
 85 adapted to engage over the top of one of the lugs when said lug is engaged in its seat, whereby to lock the chain guide in position upon the shell body.

4. In a pull socket switch, the combination of a shell body provided with a chain
 90 slot and with seats at points below and at opposite sides of the chain slot, a chain guide having a base fitting over the outside of the shell body and covering the lower end of the chain slot therein, lugs on the base
 95 of the chain guide engaging the seats at the opposite sides of and below the chain slot, and means securing the chain guide thus positioned upon the outside of the shell body.

5. In a pull socket switch, the combination of a shell body provided with a chain
 100 slot and with seats at opposite sides of the chain slot, a chain guide having a base fitting over the outside of the shell body and covering the lower end of the chain slot therein, hooked lugs on the base of the
 105 chain guide spaced apart to engage in the seats at the opposite sides of the chain slot in the shell body and a spring tongue on the shell body adapted to engage over the top of one of the hooked lugs when said lug is engaged in its seat whereby to lock the chain
 110 guide in position upon the shell body.

6. In a pull socket switch, the combination of a shell body provided with a chain
 115 slot, a chain guide having a base lying on the outside of the shell body, fitted to the shell body and covering the lower end of the chain slot therein, interlocking means on the chain guide base and shell body in-
 120 dependent of the chain slot in the body for positioning the chain guide over the chain slot and means securing the chain guide thus positioned upon the shell body.

7. In a pull socket switch, the combination of a shell body provided with a chain
 125 slot and with seats below and at opposite sides of the chain slot, a chain guide, a lug on the lower end of the chain guide adapted
 130

to engage in the seat below the chain slot to prevent lateral displacement of the lower end of the chain guide with respect to the chain slot, spaced hooked lugs on the upper portion of the chain guide arranged to engage in the seats at opposite sides of the chain slot to prevent downward displacement of the chain guide and a spring tongue on the shell body engaging over the top of one of the hooked lugs when said lug is engaged in its seat whereby to hold the chain guide against upward displacement.

8. In a pull socket switch, the combination of a shell body provided with a chain slot, a chain guide having a base fitting the outside of the shell body and covering the lower end of the chain slot therein, inter-engaging means on the chain guide base and shell body for positioning the chain guide over the chain slot, a switch carrying

block having a lug projecting into the chain slot and overstanding the base of the chain guide and a cap secured to the shell body.

9. In a pull socket, a shell body having a chain slot, a chain guide carried by the shell body at said slot and a spring tongue carried by one of said parts and engaging the other part for detachably securing said chain guide to said body.

10. In a pull socket, a shell body having a chain slot, a chain guide carried by the shell body at said slot and a manually operable catch carried by one of the said parts and engaging the other part for detachably securing said chain guide to said body.

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Witnesses:

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